



Welcome to the U. S. Army Corps of Engineers

Engineering Pamphlet (EP) 1110-1-8,
Construction Ownership and Operating Expense Schedule

MCACES Equipment Database Checking Program

This file is designed for your use in determining the MCACES equipment database (NAT99a, 30 June 1999) you are using is calculating correctly. The calculated rates shown in this file use the Area Factors listed in Appendix B of the 30 June 1999 EP 1110-1-8. The calculated rates also use the updated "Equipment Appendix files" (Appendices D & E) that were provided, by Walla Walla District, on the "MCACES Equipment Databases" installation CD or by Huntsville on the Tri-Service Cost Engineering Suite CD dated November 2000. This file will enable you to ensure that your calculations are correct. A [flowchart](#) and bookmarks are provided to help navigate through this process. Remember that each edition of the MCACES Equipment database uses matching equipment appendices. A [README file](#) is provided to provide the user with additional information. **Click your mouse on blue letters to navigate to the designated areas indicated by the words in blue. Use the ◀ ▶ arrows above to navigate back and forward or use the previous page arrow on the bottom of each page.**

➡ **Check my MCACES Equipment Rates**

EP 1110-1-8, MCACES Equipment Database Check

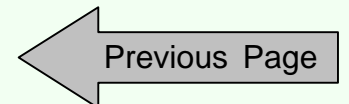
Are you using NAT99a or one of the twelve regions of the MCACES equipment databases provided on the Tri-Service Cost Engineering Suite CD dated November 2000?

➡ **Yes, I am using one of the databases**

If you are not using NAT99a or one of the twelve regional MCACES equipment databases provided on the Tri-Service Cost Engineering Suite CD dated November 2000 as your MCACES equipment database, one of these files needs to be installed and selected as your equipment database in MCACES now.

➡ **Done installing and selecting a equip database**

NOTE: If you don't have any of these databases, they are located on the Tri-Service Cost Engineering Suite CD, mailed to each cost engineer by Huntsville. To obtain the Tri-Service Cost Engineering Suite CD, contact Jan James in Huntsville, TRACES Group at (256) 895-1832 or email jan.d.james@hnd01.usace.army.mil.



EP 1110-1-8, MCACES Equipment Database Check

Are the Area Factors in MCACES the same as the Appendix B in the EP?
(Make sure that the undiscounted FCCM is set to 5.00% for this exercise!!)

➡ **Yes, Area Factors are the same as Appendix B in the EP**

➡ **View Appendix B Area Factors from EP 1110-1-8**

How do I View the Area Factors in MCACES?

MCACES GOLD version 5.30 or 5.31

1. In MCACES version 5.30/5.31, "Opening menu", "Services", "Select" the Equipment Database File.
2. Highlight and Edit the Equipment Database file {F4}.
3. Edit Other {Shift F7}.

MCACES For Windows (MFW) version 1.20

1. In MFW, go to "File", "Open" and the Equipment Database File.
2. Under "File", select the "Summary Info" line.
3. Select the "Area Factors" tab.
4. Select the "Freight Rate" tab.

➡ **No, the MCACES Area Factors need to be changed.
Go to the Area Factors update instruction sheet.**

EP 1110-1-8, MCACES Equipment Database Check Area Factors update instructions.

**** You may not have permission to change the Area Factors, if so, see your office's MCACES POC. ****

- ➡ **Done updating Area Factors in MCACES & Recalculating**
- ➡ **View Appendix B Area Factors in the EP for all regions**

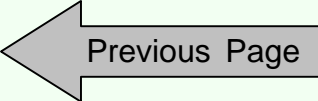
Instructions to change the Area Factors and Recalculate the Database:

MCACES GOLD version 5.30 or 5.31

1. In MCACES version 5.30/5.31, "Opening menu", "Services", "Select" the new equipment database file.
2. Highlight and Edit the Equipment Database file {F4}.
3. Change the name to the correct Region and Number.
4. Re-enter the same "Issue Date".
5. Edit Other {Shift F7}.
6. Change or retype all area and freight factors that come from Appendix B – Area Factors.
7. Save Factors {F10} and previous screen will pop up.
8. Save screen {F10} & program prompts the following "Database Conversion. The process is not Interruptible Proceed? (Y/N)".
9. Type "Y" and the program will calculate the equipment rates based on the new area factors.

MCACES For Windows (MFW) version 1.20

1. In MFW, go to "File", "Open" and the Equipment File.
2. Under "File", select the "Summary Info" line.
3. Change the name to the correct Region and Number.
4. Re-enter the same "Issue Date".
5. Select the "Area Factors" tab.
6. Change or retype all the area factors that come from Appendix B.
7. Select the "General" tab and the program will prompt to recalculate.
8. Press the "OK" button and the program will calculate the equipment rates based on the new factors.
9. Re-enter the same "Issue Date".
10. Select the "Freight Rate" tab.
11. Change or retype all the freight factors that come from Appendix B.
12. Select the "General" tab and the program will prompt to recalculate.
13. Press the "OK" button and the program will calculate the equipment rates based on the new factors.
14. Then press the "OK" button and you have the new rates.



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AREA FACTORS FOR ALL REGIONS

Below is a listing of all regional area factors for reference only. The area factor's used for this pamphlet are loacted on previous page B-1.

										Freight Cost													
Reg		SST	WHPY	LAF	Elec	Gas	D-Off	D-On		Thru CWT \$	Thru CWT \$	Thru CWT \$	Thru CWT \$	Thru CWT \$	Thru CWT \$	Thru CWT \$	Thru CWT \$	Thru CWT \$	Thru CWT \$	Thru CWT \$	Thru CWT \$	Thru CWT \$	Thru CWT \$
1	NORTHEAST	1999	5.60%	1360	1.15	\$0.101	\$1.06	\$0.86	\$1.10	240	\$16.78	300	\$11.88	400	\$7.78	500	\$5.92	700	\$4.44	800	\$4.44	99,999	\$4.77
2	MIDEAST	1999	5.40%	1450	1.03	\$0.068	\$1.01	\$0.79	\$1.04	240	\$9.49	300	\$7.79	400	\$6.31	500	\$5.02	700	\$3.54	800	\$3.54	99,999	\$3.25
3	SOUTHEAST	1999	7.30%	1530	0.85	\$0.065	\$0.94	\$0.74	\$0.99	240	\$12.57	300	\$10.18	400	\$8.14	500	\$6.39	700	\$4.46	800	\$4.46	99,999	\$4.05
4	NORTHCENTRAL	1999	5.40%	1260	1.03	\$0.063	\$1.08	\$0.81	\$1.06	240	\$10.47	300	\$8.11	400	\$6.28	500	\$4.83	700	\$3.33	800	\$3.33	99,999	\$3.23
5	MIDWEST	1999	7.10%	1400	0.96	\$0.062	\$0.97	\$0.80	\$1.04	240	\$13.21	300	\$8.48	400	\$5.65	500	\$3.20	700	\$2.46	800	\$2.46	99,999	\$2.36
6	SOUTHWEST	1999	8.20%	1590	0.88	\$0.067	\$0.99	\$0.74	\$0.98	240	\$10.14	300	\$8.01	400	\$6.27	500	\$4.84	700	\$3.33	800	\$3.33	99,999	\$3.29
7	WEST	1999	7.50%	1630	1.19	\$0.075	\$1.11	\$0.92	\$1.16	240	\$15.38	300	\$11.80	400	\$8.95	500	\$6.68	700	\$4.44	800	\$4.44	99,999	\$4.31
8	NORTHWEST	1999	4.50%	1540	1.11	\$0.047	\$1.11	\$0.92	\$1.17	240	\$16.49	300	\$12.74	400	\$9.72	500	\$7.31	700	\$4.89	800	\$4.89	99,999	\$4.83
9	ALASKA	1999	0.00%	1040	1.24	\$0.094	\$1.20	\$1.00	\$1.24	240	\$21.32	300	\$19.27	400	\$17.50	500	\$15.96	700	\$14.61	800	\$14.61	99,999	\$13.75
10	HAWAII	1999	4.17%	1480	1.21	\$0.124	\$1.40	\$0.84	\$1.40	240	\$22.44	300	\$20.84	400	\$19.50	500	\$18.38	700	\$17.43	800	\$17.43	99,999	\$17.37
11	PUERTO RICO	1999	6.60%	1560	0.75	\$0.048	\$1.05	\$0.97	\$1.19	240	\$22.87	300	\$21.72	400	\$20.70	500	\$19.80	700	\$19.00	800	\$19.00	99,999	\$18.30
12	KWAJALEIN	1999	4.17%	1390	1.15	\$0.124	\$0.84	\$0.85	\$0.85	240	\$22.44	300	\$20.84	400	\$19.50	500	\$18.38	700	\$17.43	800	\$17.43	99,999	\$17.37

SST = State Sales tax

WHPY = Work Hours Per Year

LAF = Labor Adjustment Factor

Elec = Electicrty Cost Per kW-Hr

Gas = Gasoline Cost per Gal

D-Off = Diesel-Off Road Cost per Gal

D-On = Diesel-On Road Cost per Gal

CWT = Hundred Pounds

EP 1110-1-8, MCACES Equipment Database Check
Are the Equipment Appendix files (Appendix E & D) correct?

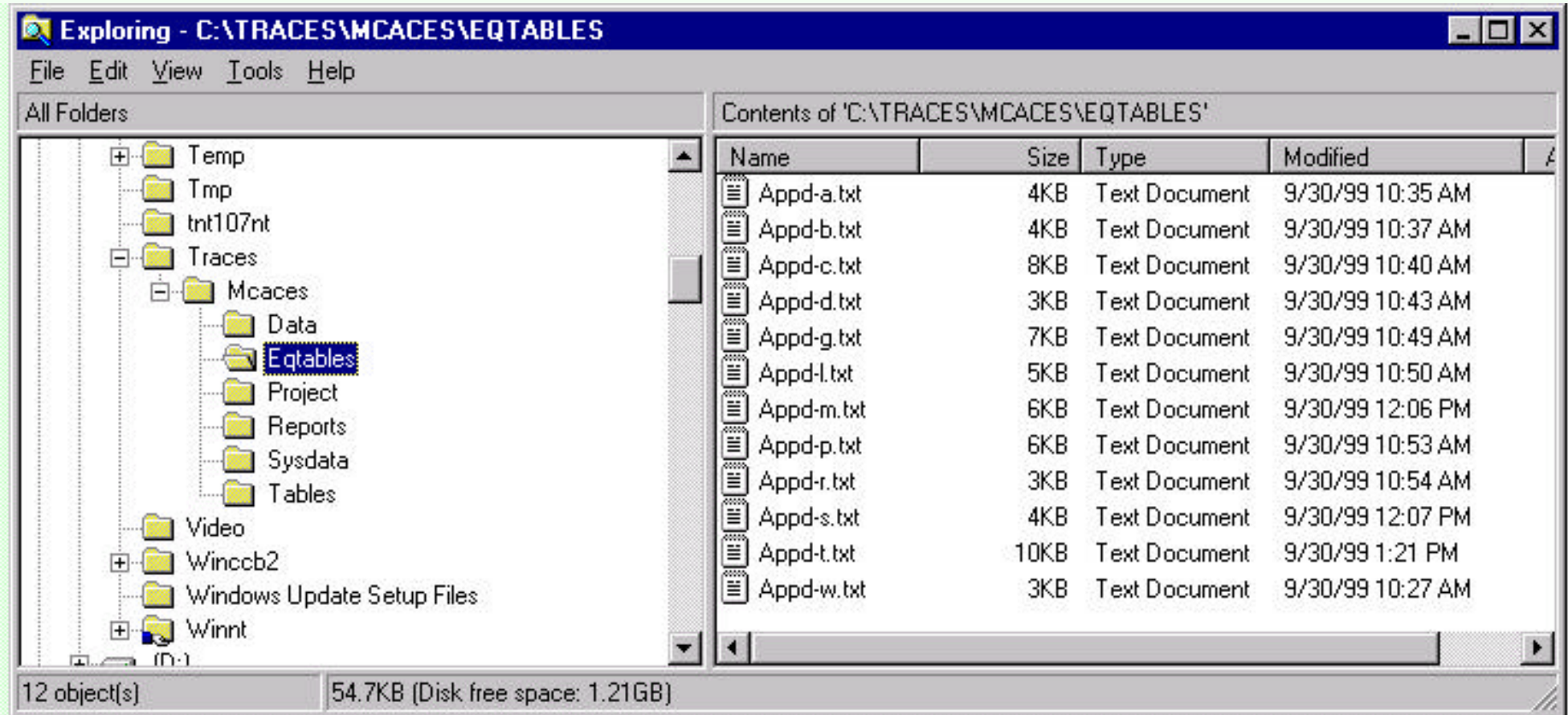
- ➡ **Yes, I have checked & the Appendices are correct**
- ➡ **I don't know. How do I determine if they are correct?**

No, the equipment files need to be updated.

- ➡ **How do I update them?**
- ➡ **See README file for more information**

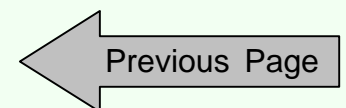
EP 1110-1-8, MCACES Equipment Database Check

Are the Equipment Appendix files correct?



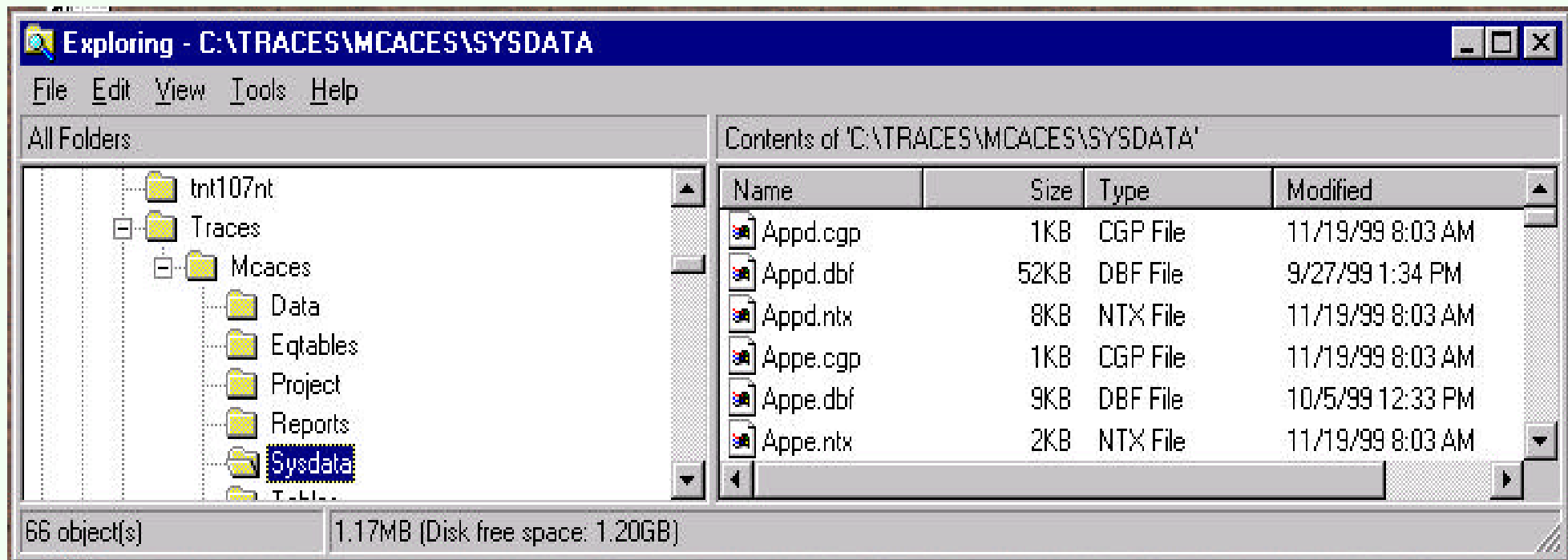
Look in the area of the TRACES directory. Find the **MCACES\Eqtables** and **GOLD\Eqtables** sub-directories and find the files shown above. Do they have the date as shown? If they don't, you will need to update the Appendix files.

- ➡ These files are correct, check the remaining files.
- ➡ These files are not correct, they need updating.



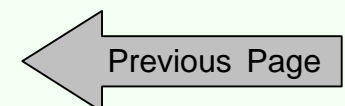
EP 1110-1-8, MCACES Equipment Database Check

Are the Equipment Appendix files correct?



Look in the area of the TRACES directory. Find the **MCACES\Eqtables** and **GOLD\Eqtables** sub-directories and find the files Appd.dbf and Appe.dbf shown above. Do they have the date as shown? If they don't, you will need to update the Appendix files.

- ➡ These files are correct.
- ➡ These files are not correct, they need updating.



EP 1110-1-8, MCACES Equipment Database Check

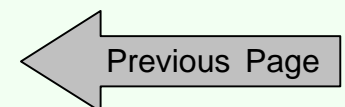
Appendix D & E update instructions using the Update CD.

1. Obtain the "MCACES Equipment Databases CD" (sent by Walla Walla District) or the "Tri-Service Cost Engineering Suite CD" (Sent by Huntsville). These CDs were sent to all TRI-SERVICE Cost Engineers.
2. Check with your MCACES POC for help in obtaining either of these CDs.
3. These CDs have the Equipment Appendix Files as well as the Equipment Databases.
4. Follow the directions that accompany either CD.
5. The CD will update the old Appendix files with the 30June 1999 Appendix E & D files.
6. You will need to recalculate the equipment database before checking your rates.

➡ Done updating Appendix E & D files using CD

➡ Recalculation instructions

➡ Go to Assistance Sheet for help in getting update CD



EP 1110-1-8, MCACES Equipment Database Check

Have you recalculated MCACES equipment database NAT99a?

➡ **Yes – I have recalculated NAT99a prior to this time**

If you have not recalculated the NAT99a database please do so now.

➡ **I am done recalculating NAT99a**

Instructions to Recalculate the Database:

MCACES version 5.30

1. In MCACES version 5.30, "Opening menu", "Services", "Select" the new equipment database file.
2. Highlight and Edit the Equipment Database file {F4}.
3. Change the name to the correct Region and Number.
4. Re-enter the same "Issue Date".
5. Edit Other {Shift F7}.
6. Change or retype all area and freight factors that come from Appendix B – Area Factors.
7. Save Factors {F10} and previous screen will pop up.
8. Save screen {F10} & program prompts the following "Database Conversion. The process is not Interruptible Proceed? (Y/N)".
9. Type "Y" and the program will calculate the equipment rates based on the new area factors.

MCACES For Windows (MFW) version 1.20

1. In MFW, go to "File", "Open" and the Equipment File.
2. Under "File", select the "Summary Info" line.
3. Change the name to the correct Region and Number.
4. Re-enter the same "Issue Date".
5. Select the "Area Factors" tab.
6. Change or retype all the area factors that come from Appendix B.
7. Select the "General" tab and the program will prompt to recalculate.
8. Press the "OK" button and the program will calculate the equipment rates based on the new factors.
9. Re-enter the same "Issue Date".
10. Select the "Freight Rate" tab.
11. Change or retype all the freight factors that come from Appendix B.
12. Select the "General" tab and the program will prompt to recalculate.
13. Press the "OK" button and the program will calculate the equipment rates based on the new factors.
14. Then press the "OK" button and you have the new rates.

EP 1110-1-8, MCACES Equipment Database Check

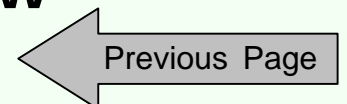
Compare the values in this table with your MCACES or MFW equipment rates using the equipment ID number. Four units of equipment have been selected.

**** Region 9, (Alaska) is calculated using additional factors - contact Walla Walla District for assistance.**

NAT99a	C90AM001	L40ME019	L50CS004	T50GM005	
MCACES Equipment Database	CRANE,MECH,TRK MTD, 75T/170'BOOM	LDR,FE, WH, 66"BKT, SKID-STEER	LDR,BH,WH, 1.00CY FE BKT, 24" DIP, EXTENDAHOE	TRK,HWY, 8,600GVW,4X4, SUBURBAN	Regions
1 Region	\$92.66 /hr	\$10.22 /hr	\$16.13 /hr	\$10.82 /hr	NORTHEAST
2 Region	\$86.92 /hr	\$9.34 /hr	\$14.87 /hr	\$10.08 /hr	MIDEAST
3 Region	\$81.17 /hr	\$8.63 /hr	\$13.80 /hr	\$9.33 /hr	SOUTHEAST
4 Region	\$88.75 /hr	\$9.50 /hr	\$15.13 /hr	\$10.40 /hr	NORTHCENTRAL
5 Region	\$86.06 /hr	\$9.29 /hr	\$14.78 /hr	\$9.87 /hr	MIDWEST
6 Region	\$82.35 /hr	\$8.73 /hr	\$13.99 /hr	\$9.60 /hr	SOUTHWEST
7 Region	\$93.87 /hr	\$10.63 /hr	\$16.56 /hr	\$11.15 /hr	WEST
8 Region	\$89.34 /hr	\$10.19 /hr	\$15.79 /hr	\$10.70 /hr	NORTHWEST
9 Region **	\$96.98 /hr	\$10.99 /hr	\$16.95 /hr	\$11.46 /hr	ALASKA
10 Region	\$94.90 /hr	\$10.34 /hr	\$16.32 /hr	\$12.11 /hr	HAWAII
11 Region	\$79.89 /hr	\$9.17 /hr	\$13.97 /hr	\$9.36 /hr	PUERTO RICO
12 Region	\$92.68 /hr	\$10.18 /hr	\$16.05 /hr	\$10.05 /hr	KWAJALEIN

➡ My rates match these rates - exit browser now

➡ My rates do not match these rates



How to get assistance

This sheet is to provide help in obtaining the CD for updating Appendix D and E in MCACES GOLD 5.30/5.31 or MFW 1.2. To obtain the Tri-Service Cost Engineering Suite CD, contact Jan James in Huntsville, TRACES Group at (256) 895-1832 or email jan.d.james@hnd01.usace.army.mil

To provide assistance in understanding why the calculation of the MCACES equipment rates is not working:

Please contact your MCACES POC first to ensure all items were correctly completed or if the POC has either CD. When you have done all you can do in your office with your MCACES POC then contact:

Walla Walla District, Cost Engineering Branch:

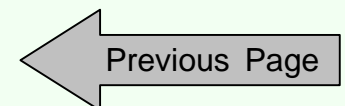
Chief - **Kim Callan**, telephone 509-527-7511,
email: kim.c.callan@usace.army.mil

Equipment Pamphlet POC - **Rick Grubb**, telephone 509-527-7515,
email: richard.s.grubb@usace.army.mil, FAX 509-527-7808

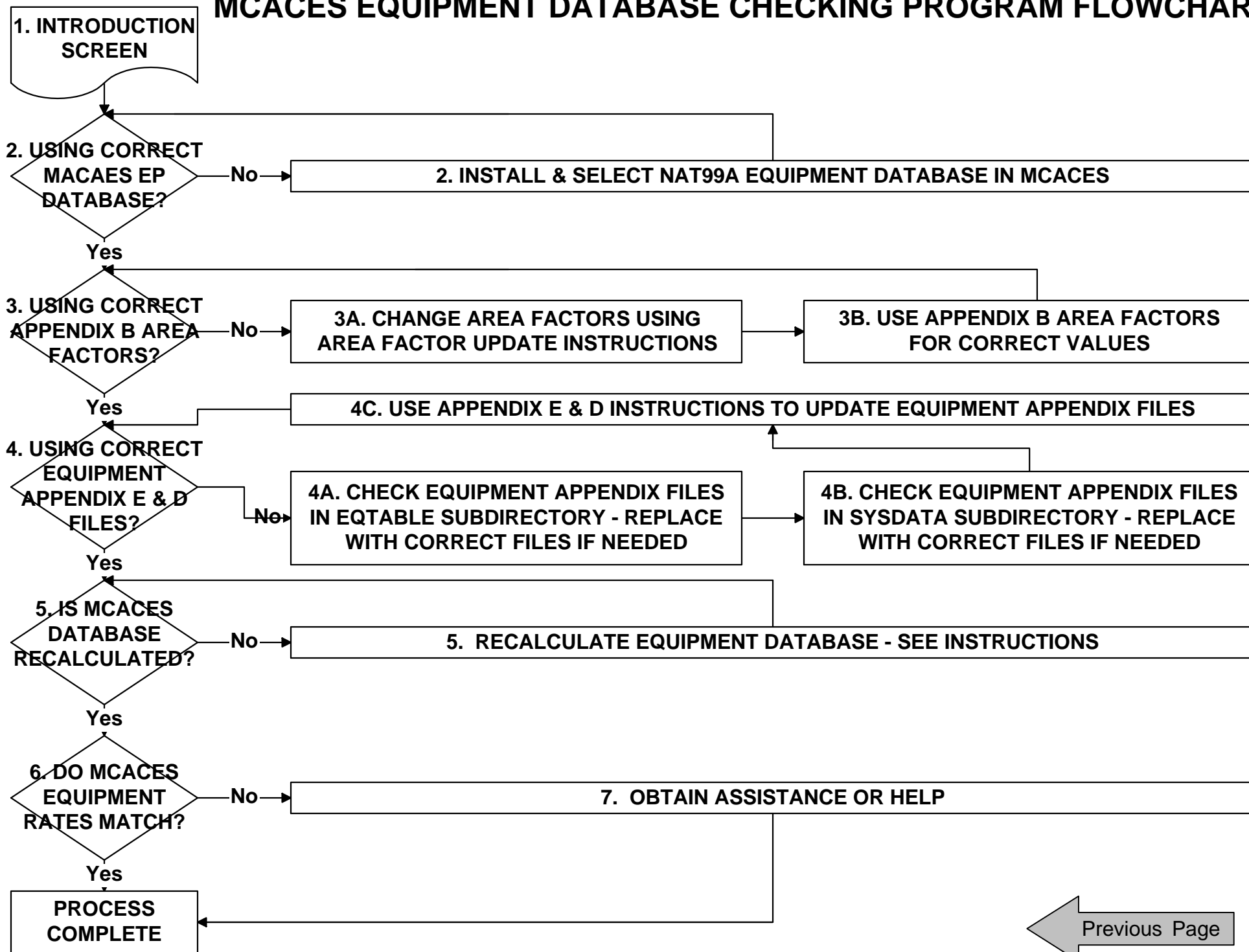
Walla Walla Cost Engineering USACE Support Homepage:

<http://www.nww.usace.army.mil/cost>

➡ **Exit browser now or return to program**



MCACES EQUIPMENT DATABASE CHECKING PROGRAM FLOWCHART



EP 1110-1-8, MCACES Equipment Database Check

README file

Important notes:

1. Every published equipment database has associated equipment appendix files. I.e. the NAT99a equipment database is from the 30 June 1999 EP and has specific equipment appendix files that calculate correct equipment rates. To use the wrong appendix files with the equipment database would calculate wrong equipment rates. If you need to calculate equipment rates in MCACES other than 30 June 1999 (NAT99a) please contact Walla Walla District for help.
2. The equipment appendix files are located in the eqtables and sysdata subdirectories of your mcaces or gold directories. The files in the eqtables subdirectory are .txt files and the files in the sysdata subdirectory are .dbf, .ntx, and .cgp. The .cgp files are used by the windows version of MCACES and the .dbf and .ntx are used in both versions. The .dbf are the database files and the .ntx are the index files for the .dbf files.
3. The Alaska District or Region 9, equipment database is calculated using an additional factor. If you need to use this specially calculated database please contact Walla Walla District.
[Go to "How To Get Assistance" page.](#)
4. Do not compare the hourly rates in this program with your equipment database without first recalculating. Please go step-by-step through this program to ensure correct calculation of your equipment database.

